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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/791,734

03/04/2004

Naoki Watanabe

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03/17/2006

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.  
1800 DIAGONAL ROAD  
SUITE 370  
ALEXANDRIA, VA 22314

EXAMINER

MOORE, PATRICK M

ART UNIT

PAPER NUMBER

2188

DATE MAILED: 03/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/791,734	<b>Applicant(s)</b> WATANABE, NAOKI	
	<b>Examiner</b> Patrick M. Moore	<b>Art Unit</b> 2188	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 January 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 and 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/4/04</u> | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Claims 1-4 & 6-13 have been amended on 27 January 2006.
2. Claims 1-8 and 13 have been withdrawn from consideration.
3. Claims 9-12 have been examined.

***Election/Restrictions***

4. Newly submitted Claims 1-8 & 13 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Invention I. Amended Claims 1-8 & 13 are drawn to a method of migrating data including a sequential host route-changing phase, classified in class 711, subclass 165.

Invention II. Amended Claims 9-12 are drawn to a method of migrating data including a route-verification process, classified in class 711, subclass 165.

a. The inventions are distinct, each from the other because of the following reasons:

b. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, Invention I has separate utility from Invention II such as a method of migrating data between a plurality of host computers comprising steps of conducting a route-changing phase which sequentially changes an indication of access destination of storage

subsystems in a plurality of host computers. Likewise, Invention II has a separate utility from Invention I, such as a method of migrating data between a plurality of host computers comprising steps of conducting a route verification process is performed by which a route is determined to be correct or not. See MPEP § 806.05(d).

c. Because these inventions are independent or distinct for the reasons given above and the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

d. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, Claims 1-8 & 13 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

As such, Claims 1-8 & 13 have been withdrawn from consideration.

#### ***Response to Amendment***

5. Applicant's amendments and arguments filed on 27 January 2006 in response to the Office Action mailed 27 October 2005 have been fully considered with the following result:

- a. The amendment filed 27 January 2006 is sufficient to overcome the rejection of Claim 12 based upon 35 U.S.C. 112, first paragraph.
- b. The amendment filed 27 January 2006 is sufficient to overcome the rejection of Claims 1 & 9-12 based upon 35 U.S.C. 112, second paragraph.

c. The amendment filed 27 January 2006 is insufficient to overcome the rejection of Claim 1 based upon 35 U.S.C. 102(e) as set forth in the last Office action because: Applicant's arguments are not persuasive. Therefore, the rejections made in the previous Office Action are maintained and restated below, with changes as needed to address amendments. Due to the above election by original presentation and the amendment to Claims 9-12 which includes original Claim 1, the below rejection is maintained with changes to address the amendments.

***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagasawa et al (US PGPub # 2003/0145169), herein Nagasawa.

a. As per Claim 9, Nagasawa discloses a method of migrating data from an old storage subsystem to a new storage subsystem in a data processing system which includes a plurality of host computers and a plurality of storage subsystems **[Figure 10, #10a, #10b, #11, #13 & ¶0014-0015]** said method comprising the steps of: conducting a route-changing phase before migration of the data from the old storage subsystem to the new storage subsystem **[Figure 2, #5c-5h & ¶0013]**; in said route-changing phase, permitting each host computer to access both the old and new storage subsystems **[Figure 2, #5e, #50 & ¶0013]**; in route-changing phase, by said new storage subsystem, reading

data from said old storage subsystem in response to a read request from a host computer, sending the data to said host computer, and writing data into said old storage subsystem in response to a write request from a host computer **[Figure 3, #104, ¶0018 & ¶0049]**, wherein a route verification process is performed by which a route set in said route-changing phase is correct or not before migrating the data from said old storage subsystem to said new storage subsystem **[¶0103]**. Examiner understands Nagasawa's disclosed "*detecting a failure of in an access path*" **[¶0103]** to be functionally equivalent to Applicant's claimed route verification process. Additionally, Nagasawa establishes the need for such processing in **¶0021** in order to "*realize smooth subsystem replacement while avoiding occurrence of a failure*", as disclosed in Nagasawa, **¶0016**.

b. As per Claim 10, Nagasawa further discloses a method of migrating data according to claim 9, wherein a route is set such that access from said host computer to said old storage subsystem is prohibited and access to said new storage subsystem is allowed during said route verification process **[Figure 3, #106 & ¶0058]**, wherein said new storage subsystem writes data requested by said host computer to said new storage subsystem and stores written data **[Figure 3, #104, ¶0018, ¶0049 & ¶0052]**, wherein said new storage subsystem, in response to a read request from said host computer, refers to said written data and checks to see if the data stored in said new storage subsystem during said route verification process are updated **[Figure 4, #202]**, wherein when the data stored in said new storage subsystem are updated during said route verification

process, the data are read from said new storage subsystem and sent to said host computer [Figure 4, #202, #207 & ¶0062], and wherein, when the data stored in said new storage subsystem are not updated during said route verification, the data are read from said old storage subsystem and sent to said host computer [Figure 4, #202, #203, #205, #207 & ¶0061].

c. As per Claim 11, Nagasawa further discloses a method of migrating data according to claim 9, wherein data updated during said route verification process are discarded when the set route is determined to be incorrect and a state is returned to a state before route change [¶0055].

d. As per Claim 12, Nagasawa further discloses a method of migrating data according to claim 9, wherein the data updated during said route verification process are discarded when the set route is determined to be correct, and data-migration processing is executed after returning to a state before route change [¶0055].

### ***Response to Arguments***

7. Applicant's arguments filed 27 January 2006 have been fully considered but they are not persuasive. Applicant's arguments to traverse rejections pertaining to Nagasawa are discussed below.

a. Nagasawa teaches *the host computers being permitted to access either the new storage subsystem or the old storage subsystem during the route-changing phase* in Figure 2, #5e.

b. Nagasawa further teaches *processes that are performed to account/correct possible inconsistencies that can be introduced when computers have access to both new/old storage subsystems* in ¶0055. Specifically, Nagasawa discloses that “the data is dropped by the migration” [¶0055].

c. Finally, Nagasawa further *allows the host computers to access both the old and new storage subsystems in the route changing phase* is ¶0018 and ¶0083. Specifically, Nagasawa discloses that “the CPU 10 accesses to both of the old CU 13 and the new CU 11” [Figure 10 & ¶0055].

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick M. Moore whose telephone number is (571) 272-1239. The examiner can normally be reached on M-F 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabahn can be reached on (571) 272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Mano Padmanabhan*  
3/8/06

PMM

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SUPERVISORY PATENT EXAMINER